

CPC**COOPERATIVE PATENT CLASSIFICATION****F41H**
ARMOUR
ARMoured TURRETS
ARMoured OR ARMED VEHICLES
MEANS OF ATTACK OR DEFENCE, e.g. CAMOUFLAGE, IN GENERAL
Guide heading:

- F41H 1/00** **Personal protection gear** (shields for personal use [F41H 5/08](#); {footwear for use in minefields [A43B 3/0026](#) }; for protection against chemical warfare [A62B](#))
- F41H 1/02** . Armoured or projectile- or missile-resistant garments
 Composite protection fabrics { ([F41H 5/04](#) takes precedence) }
- F41H 1/04** . Protection helmets ([crash helmets A42B 3/00](#))
- F41H 1/06** . . of steel
 Steel head-shields
- F41H 1/08** . . of plastics
 Plastic head-shields
- F41H 3/00** **Camouflage, i.e. means or methods for concealment or disguise** (for vessels [B63G 8/34](#), [B63G 13/02](#); {sound camouflage, i.e. simulating gun fire noise, [F41A 33/04](#); dummy or decoy targets [F41J](#) ; chaff per se [F41J 2/00](#); ammunition for dispensing chaff [F42B 5/15](#), [F42B 12/70](#); radar absorbing fabrics [H01Q 17/005](#) })
- F41H 3/02** . {Flexible, e.g. fabric } covers, e.g. screens, nets {characterised by their material or structure } ([making thereof, see the relevant classes, e.g. D04](#))
- F41H 5/00** **Armour**
Armour plates (processes for manufacturing or treating [B21](#) ,[C21](#) , { heat treatment [C21D 9/42](#); wall or panel structure for safes [E05G 1/024](#) })
- F41H 5/007** . Reactive armour
 Dynamic armour
- F41H 5/013** . Mounting or securing armour plates
- F41H 5/02** . Plate construction
- F41H 5/023** . . { Armour plate, or auxiliary armour plate mounted at a distance of the main armour plate, having cavities at its outer impact surface, or holes, for deflecting the projectile }
- F41H 5/026** . . . { Slat armour; Nets }
- F41H 5/04** . . composed of more than one layer { (outerwear resistant to mechanical aggressions [A41D 31/0055](#); layered products [B32B](#) ; shaping reinforced articles [B29C 67/00](#)) }
- F41H 5/0407** . . . { Transparent bullet-proof laminates } { informative reference: layered products essentially comprising glass in general [B32B 17/06](#), e.g. [B32B 17/10009](#);

- manufacture or composition of glass, e.g. joining glass to glass [C03](#) ; permanent multiple-glazing windows, e.g. with spacing therebetween, [E06B 3/66](#) }
- F41H 5/0414 . . . {Layered armour containing ceramic material }
- F41H 5/0421 {Ceramic layers in combination with metal layers }
- F41H 5/0428 {Ceramic layers in combination with additional layers made of fibres, fabrics or plastics }
- F41H 5/0435 {the additional layers being only fibre- or fabric-reinforced layers }
- F41H 5/0442 . . . { Layered armour containing metal (in combination with ceramic layers [F41H 5/0421](#); heat treatment of armour plate [C21D 9/42](#)) }
- F41H 5/045 {all the layers being metal layers }
- F41H 5/0457 {Metal layers in combination with additional layers made of fibres, fabrics or plastics }
- F41H 5/0464 {the additional layers being only fibre- or fabric-reinforced layers }
- F41H 5/0471 . . . {Layered armour containing fibre- or fabric-reinforced layers (in combination with ceramic layers [F41H 5/0428](#), with metal layers [F41H 5/0457](#)) }
- F41H 5/0478 {Fibre- or fabric-reinforced layers in combination with plastics layers }
- F41H 5/0485 {all the layers being only fibre- or fabric-reinforced layers }
- F41H 5/0492 . . . {Layered armour containing hard elements, e.g. plates, spheres, rods, separated from each other, the elements being connected to a further flexible layer or being embedded in a plastics or an elastomer matrix }
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- F41H 5/06 . Shields (in ships [B63G 9/00](#); in aircraft [B64D 7/00](#)) {blasting mats [F42D 5/05](#) }
- F41H 5/08 . . for personal use, { i.e. hand held shields }
- F41H 5/10 . . . Spade bayonets, i.e. usable as a spade, bayonet or cover against rifle fire { (not used; see [F41C 27/04](#)) }
- F41H 5/12 . . for smallarms
for light-rocket launchers { (shields attached to smallarms [F41C 27/04](#)) }
- F41H 5/14 . . . Wheeled armoured shields
- F41H 5/16 . . for ordnance {or tanks ([F41H 5/18](#) takes precedence) }
- F41H 5/18 . . Rotating shields
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- F41H 5/20 . Turrets { (on vehicles [F41H 7/04](#)) }
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- F41H 5/22 . Manhole covers, e.g. on tanks; { Doors on armoured vehicles or structures }
- F41H 5/223 . . { Manhole covers specially adapted for armoured or fighting vehicles }
- F41H 5/226 . . { Doors on armoured vehicles or structures ([F41H 5/263](#) takes precedence) }
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- F41H 5/24 . for stationary use, e.g. fortifications {Shelters, Guard Booths (air-raid shelters [E04H 9/04](#)) }
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- F41H 5/26 . Peepholes
Windows; { Loopholes } (manufacture or composition of glass [C03](#) ; Covers therefor) { informative reference: transparent bullet-proof laminates [F41H 5/04B](#); layered products essentially comprising glass [B32B 17/06](#) }
- F41H 5/263 . . { Mounting of transparent armoured panels, e.g. bulletproof windows on vehicles }
- F41H 5/266 . . { Periscopes for fighting or armoured vehicles }

- F41H 7/00** **Armoured or armed vehicles** (general vehicle aspects [B60](#) ; armoured or armed ships [B63G](#) ; armoured or armed aircraft [B64D](#) ; mounting guns, e.g. machine guns, on vehicles [F41A 23/00](#))
- F41H 7/005** . { Unmanned ground vehicles, i.e. robotic, remote controlled or autonomous, mobile platforms carrying equipment for performing a military or police role, e.g. weapon systems or reconnaissance sensors ([F41H 11/16](#) takes precedence) }
- F41H 7/02** . Land vehicles with enclosing armour, e.g. tanks (endless-track vehicles, steering thereof [B62D](#) ; {vehicles for placing portable or sectional bridges [E01D 15/127](#); vehicles carrying floating bridges [E01D 15/22](#) })
- F41H 7/03** . . . Air-pressurised compartments for crew
Means for preventing admission of noxious substances, e.g. combustion gas from gun barrels, in crew compartments
Sealing arrangements
- F41H 7/035** . . . {Gratings for ventilation openings }
- F41H 7/04** . . . Armour construction (in general [F41H 5/00](#))
- F41H 7/042** . . . {Floors or base plates for increased land mine protection }
- F41H 7/044** . . . { Hull or cab construction other than floors or base plates for increased land mine protection (mounting of armoured plates [F41H 5/013](#)) }
- F41H 7/046** . . . { Shock resilient mounted seats for armoured or fighting vehicles }
- F41H 7/048** . . . { Vehicles having separate armoured compartments, e.g. modular armoured vehicles }
- F41H 7/10** . Minelaying land vehicles
- F41H 9/00** **Equipment for attack or defence by spreading flame, gas or smoke** {or leurre} **Chemical warfare equipment** (protection against chemicals [A62B](#))
- F41H 9/02** . Flame-throwing apparatus (for destroying vegetation [A01M 15/00](#))
- F41H 9/04** . Gas-blowing apparatus, e.g. for tear gas ([F41H 9/10](#) takes precedence)
- F41H 9/06** . Apparatus for generating artificial fog or smoke screens ({for producing special effects on stages [A63J 5/00](#) } ; smoke-pot projectors, e.g. arranged on vehicles, [F42B 5/155](#))
- F41H 9/08** . . . Smoke-pots without propulsive charge, i.e. stationary
- F41H 9/10** . Hand-held or body-worn self-defence devices using repellant gases or chemicals
- F41H 11/00** **Defence installations**
Defence devices (constructional aspects see Section E, e.g. {air-raid shelters } [E04H 9/04](#); {protective arrangements for buildings [E04B 1/92](#); extinguishing or preventing the spread of fire from, incendiary bombs [A62C 3/06](#) ; dynamic armour [F41H 5/007](#); ballistically deployed systems for restraining persons or animals [F41H 13/0006](#); electronic countermeasures [G01S](#) })
- F41H 11/02** . Anti-aircraft or anti-guided missile { or anti-torpedo } defence installations or systems (cartridges or missiles for producing smoke or for dispensing radar chaff or infra-red material [F42B 5/15](#), [F42B 12/48](#), [F42B 12/70](#); { informative reference: details of radar or sonar systems [G01S 7/00](#); jamming or electronic countermeasures [G01S 7/38](#),

- [G01S 7/495](#), [H04K 3/00](#) }
- F41H 11/04 . . Aerial barrages
 - F41H 11/05 . Net barriers for harbour defence { (arrangement of mines [F42B 22/24](#); protective nets used with ships [B63G 9/04](#)) }
 - F41H 11/06 . Guntraps { (devices specially adapted for the protection against criminal attack in airplanes [B64D 45/0015](#); burglar traps or the like, on safes [E05G 5/02](#); identifying, scaring or incapacitating burglars, thieves, or intruders [G08B 15/00](#)) }
 - F41H 11/08 . Barbed-wire obstacles
Barricades
Stanchions
Tank traps
Vehicle-impeding devices
Caltrops { (making barbed wire [B21F 25/00](#); barbed-wire fencing [E04H 17/04](#); road barricades, obstructing passage of vehicles or pedestrians [E01F 13/00](#)) }
 - F41H 11/10 . . Dispensing-apparatus therefor, e.g. devices for dispensing or reeling barbed wire
 - F41H 11/11 . . Clearing or neutralising barbed wire obstacles ({devices mounted on vehicles for cutting wire-type obstructions [B60R 19/545](#) } ; smallarm attachments for wire cutting [F41C 27/20](#))
 - F41H 11/12 . Means for clearing land minefields
Systems specially adapted for detection of landmines
 - F41H 11/13 . . Systems specially adapted for detection of landmines
 - F41H 11/132 . . . Biological systems, e.g. with detection by animals or plants
 - F41H 11/134 . . . Chemical systems, e.g. with detection by vapour analysis
 - F41H 11/136 . . . Magnetic, electromagnetic, acoustic or radiation systems, e.g. ground penetrating radars or metal-detectors
 - F41H 11/138 . . . Mechanical systems, e.g. prodding sticks for manual detection
 - F41H 11/14 . . Explosive line charges, e.g. snakes
 - F41H 11/16 . . Self-propelled mine-clearing vehicles
Mine-clearing devices attachable to vehicles
 - F41H 11/161 . . . {with ground impacting means, e.g. flails or stamping elements }
 - F41H 11/162 . . . {with ground penetrating elements ([F41H 11/161](#) takes precedence) }
 - F41H 11/164 {the elements being ploughs }
 - F41H 11/165 {the elements being rotary ground penetrating elements }
 - F41H 11/167 . . . {with surface dosering, brushing or sweeping means or with collecting means }
 - F41H 11/168 . . . {with rollers }
 - F41H 11/18 . . . with ground-impacting means for activating mines by the use of mechanical impulses, e.g. flails or stamping elements
 - F41H 11/20 . . . with ground-penetrating elements, e.g. with means for removing buried landmines from the soil ([F41H 11/18](#) takes precedence)
 - F41H 11/22 the elements being excavation buckets
 - F41H 11/24 the elements being ploughs
 - F41H 11/26 the elements being rotary ground-penetrating elements
 - F41H 11/28 . . . using brushing or sweeping means or dozers to push mines lying on a surface aside

- using means for removing mines intact from a surface
- F41H 11/30 . . . with rollers creating a surface load on the ground, e.g. steadily increasing surface load, for triggering purposes
- F41H 11/32 . . . Decoy or sacrificial vehicles
Decoy or sacrificial devices attachable to vehicles
- F41H 13/00** **Means of attack or defence not otherwise provided for { (details of radar or sonar systems [G01S 7/00](#)) }**
- F41H 13/0006 . {Ballistically deployed systems for restraining persons or animals, e.g. ballistically deployed nets }
- F41H 13/0012 . { Electrical discharge weapons, e.g. for stunning, such as tasers }
- F41H 13/0018 . . N: for nearby electrical discharge, i.e. the electrodes being positioned on the device and the device brought manually or otherwise into contact with a nearby target (batons with electric discharge capability [F41B 15/04](#); electric shock devices for animals [A01K 15/02](#))
- F41H 13/0025 . . { for remote electrical discharge via conducting wires, e.g. via wire-tethered electrodes shot at a target }
- F41H 13/0031 . . { for remote electrical discharge by means of a wireless projectile }
- F41H 13/0037 . . { for remote electrical discharge via liquid jets (details of the gun for generating the liquid jets [F41B 9/00](#)) }
- F41H 13/0043 . { Directed energy weapons, i.e. devices that direct a beam of high energy content toward a target for incapacitating or destroying the target }
- F41H 13/005 . . { the high-energy beam being a laser beam }
- F41H 13/0056 . . . { for blinding or dazzling, i.e. by overstimulating the opponent's eyes or the enemy's sensor equipment }
- F41H 13/0062 . . . { causing structural damage to the target }
- F41H 13/0068 . . { the high-energy beam being of microwave type, e.g. for causing a heating effect in the target }
- F41H 13/0075 . . { the high-energy beam being a radiofrequency beam }
- F41H 13/0081 . . { the high-energy beam being acoustic, e.g. sonic, infrasonic or ultrasonic }
- F41H 13/0087 . . { the high-energy beam being a bright light, e.g. for dazzling or blinding purposes ([F41H 13/0056](#) takes precedence) }
- F41H 13/0093 . { Devices generating an electromagnetic pulse, e.g. for disrupting or destroying electronic devices }